

Report to An Bord Pleanála

on

Appeal against Conditions No's 4 and 5

Regularisation Certificate (Reg Ref No. FS 131/16)

by

Galway County Council

for

Material Alterations to existing building/retention of existing structure which was constructed in absence of Fire Safety Certificate

at

Lakeview, Claregalway, Co Galway

CLIENT	:	AN BORD PLEANALA
AN BORD PLEANALA REF NO	:	FS07.FG0023_R01
BCA REF No.	:	131/16
OUR REF.	:	17001_FS07.FG0023
DATE	:	05 July 2017

1.0 Introduction

1.1 Subject Matter of Appeal

This report sets out my findings and recommendations on the appeal submitted by John O'Shaughnessy Fire Engineering Consultancy Limited [hereafter referenced as JOSFECL] on behalf of their Client, Joyce Supermarkets Limited, against Conditions No's 4, and 5 attached to the Regularization Certificate (BCA Reg. Reference No. 131/16) granted by Galway County Council [hereafter referenced as GCC] in respect of an application identified in the Grant of Certificate as follows:

Material Alterations to existing building/retention of existing structure which was constructed in absence of Fire Safety Certificate at Lakeview, Claregalway, Co Galway

It is noted that the premises comprises a warehouse for Joyce Supermarkets Limited and is substantially single storey with a limited area of first floor offices. The spirits and wine storage area is identified to be a separate fire zone enclosed with fire rated walls and fire shutters. The main warehouse space is circa 1,950m² in plan area and has a volume of circa 15,000m³.

The conditions being appealed are as follows:

Condition 4

Cavity Barriers are to be provided where fire resisting stair enclosures meet external walls

Reason: To ensure that the building as constructed complies with Part B of the Building Regulations 1997 to 2006

Condition 5

A static water tank of 189,000 litres suitably located is to be provided with connection for hard suction for Fire Service uses

Reason: To ensure that the building, as constructed, complies with Part B of the Building Regulations 1997 to 2006

Having reviewed the documents on the appeal file I am satisfied that the determination by the Board of this application as if it had been made the Board in the first instance would not be warranted. Accordingly I consider that it would be appropriate to use the provisions on Article 40(2) of the Building Control Regulations 1997-2015 in this instance.

1.2 Documents Reviewed

1.2.1 Fire Safety Certificate Application and Supporting Documentation submitted by JOSFECL on behalf of their Client

1.2.2 Appeal submission to An Bord Pleanala by JOSFECL dated 16.03.2017.

1.2.3 Appeal submission to An Bord Pleanala by GCC dated 10.04.2017.

2.0 Condition 4

“Cavity Barriers are to be provided where fire resisting stair enclosures meet external walls”

JOSFECL contend that this condition should be removed on the basis that the relevant provision of Table 3.2 of TGDB is Row 3 which requires that cavity barriers be provided at junctions of external walls and compartment walls and floors and since the walls enclosing the stairs are not compartment walls this provision does not apply.

For their part the BCA contend that Row 4 of Table 3.2 is applicable and provides that cavity barriers be provided at junction of cavity walls with compartment walls compartment floors and *“other walls or door assemblies which forms a fire resisting barrier”*.

It is noted that Row 4 of Table 3.2 references *“cavity walls”* but does not make clear that the Row is intended to apply to *internal cavity walls* only.

However on review of the corresponding Table in the UK Approved Document B it is noted that the equivalent clause in UKADB specifically references *internal cavity walls*.

Accordingly it could be considered that JOSFECL are technically correct in identifying that Row 4 of Table 3.2 does not apply in this case.

Notwithstanding the foregoing it is clear that the fire/smoke resistance/integrity of the stairs could be compromised in the absence of a fire barrier in the cavity at the end of the staircase walls and therefore if the condition were to be set aside it would in my view require replacement with a condition which required the applicant to protect the integrity of the stair enclosure e.g. cavity barriers around the staircase windows coupled with a fire rated internal leaf within the staircase enclosure.

Accordingly it is considered that the condition should be amended to allow for either option.

2.0 Condition 5

“A static water tank of 189,000 litres suitably located is to be provided with connection for hard suction for Fire Service uses”

JOSFECL contend that this condition should be removed on the basis that the available fireflow from the existing fire hydrants – which JOSFECL say is 27.5 litres/sec based on fireflow tests which were undertaken on behalf of the applicant – is adequate to service a building of this size. JOSFECL contend that an application of the Water UK publication *National Guidance document on the provision of water for fire fighting (3rd edition; Jan 2007) Appendix 5* would yield a requirement for a fire-flow of 20L/sec bases on the plot area of the subject building i.e. less than 1 Hectare.

JOSFECL argue that the fireflow requirement ought not to be determined on the basis of the overall plan area of the entire industrial estate in consideration of the subject building.

JOSFECL also point out that a requirement for static water storage was not imposed on the FSC which was granted by GCC for the neighbouring school development.

For their part the BCA argue that the fire-flow for the subject building ought to be determined on the basis of the overall plan area of the industrial estate and based on the Water UK standard they contend that the requirement therefore is 75 litres/seconds and that the shortfall in this capacity ought to be made up with static storage and hence the condition for a 189,000 litre tank.

The BCA argue that the school premises ought to have compartments not exceeding 800sqm in plan area whereas the subject building has substantially larger compartments/fire zones i.e. circa 1950m² for the general warehouse.

In considering this issue the following points are noted:

- In the first instance it could be argued that the responsibility to ensure that there is adequate available fire-flows in the water main system is that of the local authority under Section 29 of the Fire Services at 1981-2003 – refer copy below – and not the obligation of an individual building owner under the Building Control Act 1997-2007:

“Public water supply for fire-fighting.

29.—(1) The functions of a sanitary authority for the provision of a supply of water shall extend supply of water for fire-fighting purposes and the provision and maintenance of fire hydrants at places as the fire authority requires.

(2) Where a fire authority represents to a sanitary authority that reasonable provision has not been made for a supply of water for fire-fighting purposes, the sanitary authority shall consult with fire authority as to the measures required and shall take such measures as may be agreed.”

- There are no national/Irish standards for fire-flows
- It is noted that the minimum fire-flow recommended in BS9990 *Non-automatic fire-fighting systems in buildings – Code of practice* is 1500L/min i.e. 25L/sec. it is further noted that this minimum figure is being exceeded in the available fire flows as set out in the JOSFECL submission i.e. JOSFECL identify the available fireflow to be 27.5L/sec
- It is noted that the size of the subject building is only a small fraction of the permitted compartment size limit in TGDB for unsprinklered single storey warehouse buildings i.e. 14,000m² (Note: UK figure is *No Limit*). Accordingly, if it were to be considered that the higher figure in Water UK Guidance has to cater for a fire compartment size of 14000m² a simple extrapolation would yield a requirement for the subject building of (2500/14000) x 75L/sec = 13.5L/sec

On the basis of the foregoing it is concluded that the available fireflow of 27.5L/sec ought to be sufficient for fire-fighting purposes and that the condition as imposed by the BCA to provide on-site static storage is not justified.

4.0 Recommendations

Having considered the submissions made by the Appellant I consider that the BCA should be directed to remove Condition 5 and to amend Condition 4 to read as follows:

Condition 4

Suitable passive fire protection provisions shall be incorporated to protect the stairs from smoke and fire ingress from the adjacent accommodation. Details of these provisions should be set out and agreed in writing with the Building Control Authority.

Reason: To comply with Part B1 of the Second Schedule to the Building Regulations, 1997 to 2014

MAURICE JOHNSON

Managing Director | Chartered Engineer | BE(Hons), CEng., MStructE, MIEI, MSFPE

Date : _____